Notebook Series -- Notebooks by Experimenters Other Than Edison
Kinetophone and Kinetoscope Experiments -- A. M. Kennedy Books
Notebook, N-14-01-01.3

This notebook was used by Absalom M. Kennedy during January-February 1914 as a record of experimental work on the kinetophone. There are a few additional entries from December 1914 and January 1915. Included are experiments on frictional reproduction, motor regulation, and synchronous motors. The entries describe comparison tests between various brands of equipment, as well as inspections of records and reels for foreign orders. Also included are tests on kinetoscope shutters and film cement. At the end of the book is a list of ideas for improving the kinetoscope. The notes indicate that Kennedy received instructions directly from Edison on the work to be performed, along with comments and suggestions. There are also indications that John W. Farrell, Adolph F. Gall, Daniel Higham, and Charles W. Luhr were involved in similar work. The front cover is labeled "Jobs Undertaken. Jan. 1, 1914. & Kinetoscopes Ideas." The book contains 200 numbered pages and an index; many pages are blank.

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Kinetophone Experiments

Tractional Reproduction.

Mr. Edison outlined shoe and roll, better of steel roughened as by sand blast with the edges just knocked off - Shoe of similar surface made to fit.

Anticipates that the shoe and roll will crease and release here with the vibrating movements of sound waves.

1/2/14 Mr. Lubin completed 2 rolls.

1/5/14 Tuthill assigned to making shoes.

1/6/14 Showed steel roll & part of shoe to Mr. E. Did not like it and ordered roll made of german silver.

1/12/14 Tuthill made sample of german silver roll & shoe, lightly etched. Thus reproduced fairly well in quality but did not have enough friction or volume. Made two others, one flat, one with regular groove and etched deeper with about the same results.

1/20/14 Made shoe of fibre run on amber roll. Traction fair, quality good, volume good.

Kinetophone Experiments
Motor Regulation

Mr. Edison detailed varying tone in Kinetophonograph which was assigned to the slipping belt method of governing. Suggested use of old type M & M motor with make & break governor. This was tried but without good results due to the frail method of fastening the armature to shaft. Work was not however completed.

Kinetophone Experiments.

Synchronous Motors for Running Kinetophonograph and Kinetoscope.

Norton made up a motor generator to transform D.C. into two phase a.c. and a synchronous motor to be run from same, former to operate the Kinetoscope and latter the Kinetophonograph. Test developed that latter could run at proper speed with former. Also that unless fields were carefully adjusted, the motor generator would run away. Speed of motor generator was adjusted by varying field strength.

Norton made up for me two alternating variable speed synchronous motors in which stators were connected in multiple to the a.c. line. Rotors were wound & connected to three collector rings which were connected together. In this way the armatures generate a.c. of different frequency and the speed at

which there will run will be the difference between the frequency of the ~~stator~~ and rotor.

Tests have not been completed.

Kinetophone Studio Outfits.

To date two outfits have been supplied, one to Germany, one to Europe to be afterwards

1/9/14 Higham Becks on thickness of amplifier leather belts.

1/9/14 Mr. Nelson wants promise of earlier dates on outfits.

1/10/14 After seeing Kuhn, promised outfits on 18th & 28th

1/12/14 Pick McRae on job assembling

1/16/14 McRae finished assembling synchronizer, commenced mounting camera on table

Test of Edison Economy Transformer against Fort Wayne Compensare.

Fort Wayne Compensare - 110 Volts A.C.

Voltage Open Circuit 56.5
" Closed " 35.
At 53 amp. the following times were recorded in minutes -
$4\frac{1}{2}$ - 5 - $5\frac{1}{2}$ - 5 - $5\frac{1}{2}$

Edison
amp 35-40 = $5\frac{3}{4}$ - 5 - $4\frac{1}{4}$ - $4\frac{1}{2}$ min
" 45 = 5 - 6 - $4\frac{3}{4}$ - 5 "
" 55 = 4 - $5\frac{1}{4}$ - 5 - $5\frac{1}{2}$ "
" 60 = $3\frac{1}{2}$ - 4 - $3\frac{3}{4}$

Outs

31	31.5	34	Closed
53	53.5	53.25	Open
34	33	34.5	Closed
53.25	53.38	53	Open
37	34	36	Closed
53.25	53.25	53.12	Open

Inspection of Kinetophone
Films & Records for Foreign Orders

1/5/14. Received the following reels & records

	Reels	Records
True Bachelors	11	11
Her Redemption	6	6
Julius Caesar	5	5
The Politician	5	5
Dick The Highwayman	4	4
Tra Diavolo pts 1 & 2 sets	2	2
In a Spanish Garden	4	4
Red Guard	4	4
After Many Years part 1	1	1
" " " " 2 & 3 sets	1	1
Deaf Mute	3	2*
Butler's Burglar – pts 1 & 2 sets	5	5**
German Feature		1***

Fred. Ritter assigned to job.

* Chuckles & Records Short
** Time Records Part 3 C rejected on account of repeats.
In making new mould for this master were broken by Sickle.

Ordered print of part 3D
to inspect and see if it could
be substituted for part 3C.
** Checked this record "out".
~~Complete films inspected and returned~~
* 1/7/13 Received missing records of
Deaf Mute, inspected them &
returned to the stock room.

1/7/13 Received from Renbock
the following reels:

Fra Diavolo	3
Musical B'smiths	6
French Lecture	4
German Lecture	5
After College Days	6
Faust	3.

1/8/13 Returns from Stock Room

5 Records German Lecture
6 " After College Days
6 Films Olio Minstrel
6 Records " "
6 Records Musical Blacksmiths

1 Records French Lecture
3 " Faust
3 Sets " Fra Diavolo
Also
1 Film In a Spanish Garden
1 Record " "
1 Film French Lecture
1 Record "
1 Film Campanari
1 Record "
1 Film Afterpiece
1 Record "
2 Films Musical Blacksmiths
2 Records " "
2 Films German Lecture
2 Records " "
2 Films Olio Minstrels
2 Records " "
2 Films Fra Diavolo
2 Sets Records " "
3 Films College Days
3 Records " "
3 Films Two Shamrocks
3 Records " "

Ritter & Hausmann assigned to inspect.

	Films	Records
1/9/14. Received from Stock		
Seymour, Dempsey & Seymour 1-3	4	4
Deaf Mute 1-5	4	4
John J. McGraw 1-2	2	2
Caught in the Act	1	1
for Travelling Shows		
1/12/14 Received from Stock		
J. McGraw 1-2	4	4
Deaf Mute 1-5	4	4
Seymour, Dempsey & Seymour 1-3	3	4
1/13/14 Received		
Policman	1	
Leslie a	1	
Seymour, Dempsey & Seymour	1	
1/16/14 Received		
Butler's Burglar	4	4
In Bonnie Scotland	2	2
Actrite from Russia	2	2
Campanari	2	2
Chimes of Normandy	2	2
Singing Society	2	2

	Film	Record
Jerry & Mandy	2	2
Old Minoletto	2	2
1/20/14 Russian Serenade	1	1
" Greetings	1	1
" Two Giants	1	1
Seymour, Dempsey & Seymour	1	1
The Deaf Mute	1	1
Jno. J. McGraw	1	1
1/21/14 After Many Years a	1	1
" " B & C	1	2
Which Shall It Be	1	2
Das Rote Kerz "a"	1	1
Das Rote Kerz "B"	1	1
Studentenleben "B"	1	1
1/23/14 Dolbs Serving Girl	1	1
Which Shall It Be	2	2
1/26/14 German Studentenleben	5	5
" Das Rote Kerz	5	5
1/27/ " Studentenleben	10	10
" Das Rote Kerz	5	5

New Kinetoscope Shutters.

1/16/14

Suggested by Mr. Ball that most
qualified flicker occurs and least light
is needed for short throws, that
shutters be made having equal blades
for short throws and cutting down
bigger but the coming blade on longer
throws for best results.

12/10/14 Doctor Sutter started making
sample blank blades received
from Kinetoscope Dept.

12/9/14 Sutter finished two samples
1-3/80° blades, 1-6/90° blades.

All one week

2/11/14.

	Records	Reels
Das Rote Herz B	10	10
Einleitender Vortrag	10	10
Studentenleben a	6	6
Studentenleben B	4	4
Alles Gegen Kommt Von Oben	10	10
Der Hanoschek	10	10
Humoristische Balladen	10	10
Der Politiker B	10	10
Gerechtend in Der Senkrette	10	10
1813	10	10
The Old Violin	6	4
Much Ado Ab Be	8	2
The German Lecture	2	
The Musical Blacksmiths	1	
after College Days	1	
Carson Minstrels	1	

2/10/14

	Reels	Records
Humoristische Volkslieder	2	2
Der Handschuh	2	2
Feierabend in Der Schenke	2	2
The Old Violin	1	1
Jerry Mandy	1	1
Three Bachelors	1	1
The Mascot Act 1	1	1
" " " 2	1	1
" " " 3	1	1
Olivette " 2 part 1	1	1
" " 2 " 2	1	1
The Afterpiece	1	1
A Few Shamrocks from Ireland	1	1

New Film Cement and Paste.

Numerous complaints to Kinetoscope Department on film cement not holding and turning white.

Kinetoscope Department sent our sample bottle of "Bull Dog" cement made by the "One Drop Oil Co", Chicago. Tester this out. Consists of volatile celluloid solvents of which acetone smells as an ingredient. Cements fine provided plenty is used and film is clamped good and tight for about 20 to 30 seconds.

Made up cement to duplicate this consisting of

- Denatured Alcohol	8 parts
Acetone	2 "
Benzole	1 "

Works apparently about the same as "Bull Dog". Makes firm unbreakable joints but tends or burned or warped with respect to film. Will try and

eliminate this by adding a few drops of castor oil or a little camphor and use mood in place of denatured alcohol.

Mr. E criticizes on report that the water in Denatured Alcohol will cause film to turn white and to try absolute alcohol instead.

Mr. Farrel suggested that camel hair quill brush be used in place of tampico brush in tin as present and that this brush be fastened to the cork. Made up sample which was accepted by Farrel but rejected by Hutchison because corkwads not long enough to get hold of.

Combined Reproducer
Weight and Mirror.

Suggested by Higham.
1/6/15 - Sketch given Oscar Sturter
1/7/15 - Model finished by "

1- Werner
2- Burt
3- O'Kabe
4-
5-
6-
7
8 } Spare
9

Ideas for Improvement of Kinetoscope.
Hammond-

① Eliminate useless gears between main shaft and shutter shaft.

② Extend main and intermittent shaft and enclose intermittent in oil case.

③ Round spring clip on top magazine door.

④ Elimination of extension shadow box on B & L. lens.

⑤ Extension removable shutter shaft for packing.

⑥ Tool to turn both eccentric bushings on sprocket shaft simultaneously.

⑦ Quick break switch

[ITEM(S) FOUND IN BOOK]

Portage Open Count
56.5

Portage Closed Circuit
Arc. 35

Times
4½ - 5 - 5½ - 5 - 5½
min of arc

Avg. 53

Edison

Low	High
4	5
4½	4½
4½	6
5	5½
5½	4½

[ITEM(S) FOUND IN BOOK]

Voltage

Amperage

Low	Medium	High	
62	63	68	closed
106	107	106.5	Open
68	66	69	Closed
106.5	106.75	106	Open
74	68	72	closed
106.5	106.5	106.25	Open

Edison Transformer

Amperes	arc	Dime				
35-40	1/16"	5 3/4 min	5.	4 1/4.	4 1/2.	
45	1/16"	5.	6.	4 3/4.	5.	
55	1/16	4.	5 1/4.	5.	5 1/2.	4 1/2.
0	1/16	3 1/2	4.	3 3/4		